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Deborah Licks

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1721

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

DelDuca et al

Serial No.: 09/346,752

Filed: July 2, 1999

For: OXYGEN SCAVENGER
ACCELERATOR

Group Art Unit: 1721

Examiner: LaToya Cross

Atty. Docket No.: 47097-00716USC2

D. Haworth
#14
4.3.01

APPEAL BRIEF PURSUANT TO 37 C.F.R. §§ 1.191 AND 1.192

Assistant Commissioner for Patents
Washington, D.C. 20231

Attention: Board of Patent Appeals and Interferences

To the Assistant Commissioner for Patents:

This appeal brief is filed pursuant to the applicant's appeal to the Board of Patent Appeals and Interferences from the final rejection of claims 1 and 11-21 in an Office Action dated May 23, 2000 and an Advisory Action dated October 11, 2000 for the above-listed application.

1. REAL PARTY IN INTEREST

The real party in interest is Pactiv Corporation having a place of business at 1900 West Field Court, Lake Forest, Illinois 60045.

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2. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

3. STATUS OF CLAIMS

The applicant appeals from the final rejection of claims 1 and 11-21. A copy of the appealed claims is contained in the APPENDIX OF PENDING CLAIMS, hereby attached as Appendix 1.

4. STATUS OF AMENDMENTS

An amendment was filed on September 25, 2000 (Appendix 2) subsequent to the final rejection dated May 23, 2000 (Appendix 5). That amendment modified Claims 1 and 17 and added new Claims 22-25. In an Advisory Action dated October 11, 2000 (Appendix 3), the Examiner indicated that the proposed amendment would not be entered upon filing of a Notice of Appeal and an Appeal Brief because the amendment submitted after Final Rejection presented additional claims without canceling a corresponding number of finally rejected claims. Thus, Claims 1 and 17 have not been amended and Claims 22-25 are not included in this appeal.

5. SUMMARY OF THE INVENTION

Packaging systems that possess extremely low levels of oxygen are desirable because the fresh quality of meat can be preserved longer under anaerobic conditions than under aerobic conditions as aerobic bacteria growth is minimized under highly anaerobic conditions (page 1, line 26 to page 2, line 2).

The present invention involves an iron-based oxygen-scavenging packet with an improved composition for accelerating and maximizing the rate of oxygen absorption in a packaging system to keep meat fresh (page 3, line 29 to page 4, line 3).

The applicants' specification describes an oxygen-scavenging packet and a method of using the same. As shown in FIGS. 1, 2a, b and 3a, b, a liquid oxygen uptake accelerator is introduced into an oxygen-scavenging packet containing an elemental iron-based oxygen absorber. The oxygen uptake accelerator quickens the oxygen uptake rate of the oxygen absorber.

The present invention is particularly useful when used in a modified atmosphere packaging (MAP) process for fresh meats. The MAP process is a gas flush process that initially flushes the package to an oxygen atmosphere of about two percent or less (page 2, line 27 to page 3, line 27). A liquid oxygen uptake accelerator is added to the oxygen scavenging packet in an amount sufficient to reduce the oxygen level of the package from about 2 vol. % to less than 0.5 vol. % at a temperature of about 34° F within ninety minutes (Figures 11 and 13, page 9, lines 23-32, page 12, lines 3-11).

6. ISSUES

The sole issue in this appeal are as follows:

Whether claims 1, 11, 13-15, 17-19 and 21 are obvious and unpatentable under 35 U.S.C. § 103(a) over U.S. Pat. No. 4,588,561 to Aswell ("Aswell") (Appendix 4). Aswell was cited by the Examiner for disclosing an oxygen absorbing packet and the addition of water as an uptake accelerator to activate the oxygen absorber and thereby achieve sufficient oxygen reduction. Although Aswell differs from the present invention in the actual oxygen reduction being claimed, the Examiner contended "...that the amounts of oxygen absorber and uptake accelerator... are suitable enough to provide sufficient oxygen reduction, absent evidence to the contrary".

7. GROUPING OF CLAIMS

The only pending ground of rejection is that of obviousness under 35 U.S.C. § 103(a) over Aswell. The Applicants group appealed claims 1, 11, 13-15, 17-19 and 20 to stand or fall

together. A rejection of claims 12, 16 and 20 was withdrawn in the final Office Action. Thus, these dependent claims are presumed to be allowable if rewritten in independent form.

8. ARGUMENT

Claims 1, 11, 13-15, 17-19 and 21 were rejected under 35 U.S.C. § 103(a) as unpatentably obvious over Aswell. The rejection of these claims should be reversed for two fundamental reasons. First, Aswell does not disclose or suggest that oxygen can be reduced from about 2 vol. % to less than 0.5 vol. % oxygen at a temperature of 34° F. Second, Aswell teaches against the Applicant's invention. He said that the amount of water (accelerator) was critical - but, that amount is about ten times greater than shown to be optimum by the Applicants. It will be shown below that adding such a large amount of water in the Applicant's system does not produce the desired oxygen removal.

Aswell does not contain any objective teaching that would have led one of ordinary skill in the art to believe that the results of the claimed invention could be achieved. In fact, Aswell contains clear teachings *against* any such conclusion. Thus, the only motivation for such a conclusion can be found in the applicants' own teachings, *i.e.*, by the use of hindsight.

Aswell discloses a package which initially contains air and from which part of the oxygen is removed. The package includes a sachet within a gas impermeable container. The sachet contains a material that is reactive with and removes the oxygen from the gaseous atmosphere (col. 3, lines 40-42). This material, preferably powdered iron, is present at a level from about 25-35% (col. 4, lines 15-16) and a water absorbing filler is present at a level from about 40-60% (col. 4, lines 17-18). The goal of the Aswell invention is to reduce the level of oxygen to below 2% oxygen within two hours (col. 4, lines 47-50). Aswell states that the level of water added to the oxygen reactive composition is **critical** (col. 4, lines 51-53) and water is added at a level from about 60-80% of the weight of the oxygen reactive composition

(col. 4, lines 53-56). In his sole example, Aswell reduces the amount of oxygen from ambient (ca. 20 vol. %) to 1.18% by volume (col. 5, l. 36 to col. 6, line 7).

The Examiner agrees that Aswell differs from the claims of the present invention because Aswell does not specifically state that 2% vol. oxygen can be reduced to less than 0.5% vol. oxygen when the absorber is in contact with the uptake accelerator. But, the Examiner believes that the amounts of oxygen and uptake accelerator disclosed in Aswell are suitable to provide such oxygen reduction, and it is the Examiner's position that "...the amount of water used as an oxygen uptake accelerator is not critical, absent evidence to the contrary." (Final Office Action 5/23/00). However, the Applicants have provided such evidence, as will be seen below.

Aswell also teaches that the oxygen reactive composition should be present at a level from about 4.5 to about 6.0 grams (col. 4, lines 32-34) and that the amount of iron in the oxygen reactive composition is from about 25 to about 35 percent (col. 4, lines 15-16). Combining these numbers with the amount of water said to be critical, the amount of water per gram of iron used by Aswell is on the order of 10 times the amount of water shown to be effective in the present application to reduce the oxygen content from about 2 vol % to below 0.5 vol %. See for example, Figure 7 where an optimum amount of water is shown, which is much less than said to be critical by Aswell even though the tests began with air at ambient temperature. Thus, Aswell's teachings are very different from those of the present invention.

The Applicant's invention differs from Aswell in its ability to reduce the oxygen concentration to very low concentrations in a modified atmosphere package at a very fast rate, despite the low temperatures. This increased rate is brought about by the introducing specific amounts of an oxygen accelerator comprising water into the iron-based oxygen absorber immediately before use of the oxygen-scavenging packet. Figure 11 of the present application shows that by practicing the claimed invention, two commercially-available

packets injected with the claimed amount of accelerator of capable of reducing the oxygen level in a quart-sized jar from about 2 vol. % oxygen to below 0.5 vol. % in about 90 minutes. It may be significant that when water was available, but not injected into the packet, that very little oxygen was removed (see the upper curve). This latter result may help to explain why Aswell's teachings differ radically from the Applicant's findings.

Aswell shows a package in which the oxygen absorbing material is contained within a paper packet separately from a source of water. It is not clear whether all the water reaches the oxygen absorbing materials, but it is clear that the water is not introduced directly into the packet. It may be that the amount of water used by Aswell is much higher than the Applicants because it is not fully effective, although there may have been other reasons not discernable from the Aswell patent. In any event, Aswell intended to reduce the oxygen content of his package from about 20 vol % to 2 vol % at ambient temperatures and taught that a large amount of water was needed.

It should be noted that the amount of initial oxygen present for each gram of iron in the test reported by Aswell was approximately that in the tests carried out by and for the Applicants. Thus, it should not be thought that a small amount of water is required when a small amount of oxygen is to be removed, e.g. 2 vol. % to below 0.5 vol. %, while a large amount of water is needed when a larger amount of oxygen is to be removed, e.g. 20 vol. % to 2 vol. %.

The Declaration of Susan P. Evans under 37 C.F.R. § 1.132 ("Evans Declaration"), attached to Appendix 2, provides clear evidence that the present invention would not have been obvious in view of the teachings of Aswell. The Evans Declaration reports the results of experiments in which the conditions and specifications (including the amount of water used) of Aswell were duplicated to determine the amount of oxygen content reduction, if any.

However, it was not possible to achieve a reduction in oxygen from ambient to a level below 2 vol. % oxygen, as Aswell reported.

Several quart jars were tested at room temperature with an ambient atmosphere of 20.9 vol. % oxygen. One MRM-200 (weighing approximately 10g) sachet was activated with liquid (either 5% Acetic Acid or water) and placed in the quart jar. The lid was tightly closed and allowed to sit for 60 minutes. The lid of the quart jar had a 1/8" hole drilled into it to allow a reading to be taken from the quart jar using an oxygen sensor. A piece of septum was placed over the hole to ensure that there was no gas exchange between the jar and the outside environment. At the end of the sixty minutes, a reading of percent oxygen and percent carbon dioxide was taken from the jar and recorded. This procedure was repeated for three runs for each of the following activators: 1.0 ml of 5 % Acetic Acid (100% vinegar) and 1.2, 6.5 and 12 ml of water. Evans Declaration at ¶ 5.

Test	Activator	One hour percent oxygen	One hour percent Carbon dioxide	Time of Test
1	1 ml 5 % Acetic Acid	5.5	18.8	60 min.
2	1 ml 5 % Acetic Acid	4.72	19.1	60 min.
3	1 ml 5 % Acetic Acid	5.38	18.1	60 min.
Average	-	5.20	18.67	60 min.

Test	Activator	One hour percent oxygen	One hour percent Carbon dioxide	Time of Test
4	1.2 ml water	6.38	16.5	60 min.
5	1.2 ml water	8.44	19.3	60 min.
6	1.2 ml water	8.40	16.7	60 min.
Average	-	7.74	17.50	60 min.

Test	Activator	One hour percent oxygen	One hour percent Carbon dioxide	Time of Test
7	6.5 ml water	15.8	17.5	60 min.
8	6.5 ml water	16.4	16.8	60 min.
9	6.5 ml water	15.7	18.4	60 min.
Average	-	15.97	17.57	60 min.

Test	Activator	One hour percent oxygen	One hour percent Carbon dioxide	Time of Test
10	12 ml water	17	13.5	60 min.
11	12 ml water	16.2	18.5	60 min.
12	12 ml water	16.3	14.7	60 min.
Average	-	16.50	15.57	60 min.

The results above indicate that the amount of liquid present in the packet significantly affects the amount of oxygen within the jar. Specifically, as the amount of water increases to the level of that used in Aswell (Aswell contains 60-80 vol. % water relative to the weight of the oxygen reactive material, the experiments using 6.5 and 12 ml water in this experiment used at least the level of water present in Aswell), the reaction becomes impractical to continue because a very small amount of oxygen is actually being removed from the system. Basic scientific laws indicate that this reaction would be even slower (*i.e.*, less oxygen would be absorbed) at lower temperatures. Also, the rate of oxygen removal would be expected to be lower as the concentration is reduced. One skilled in the art would not predict the amount of water required to reduce the amount of oxygen from 2 vol. % to less than 0.5 vol. % at a temperature of about 34° F, as disclosed and claimed in the present application. Evans Declaration at ¶ 7.

As suggested above, the mere fact that references can be modified does not render the resultant modification obvious unless the prior art also suggests the desirability of the modification. *In re Mills*, 916 F.2d 680 (Fed. Cir. 1990); MPEP § 2143.01. Aswell did not disclose or suggest the inventions claimed in the present application. Furthermore, even

though modifications of the disclosures of Aswell may have been within the ordinary skill in the art, a *prima facie* case of obviousness is not met without some objective reason to go beyond the objective teachings of the reference. See *Ex parte Levengood*, 28 U.S.P.Q. 2d 1300 (Bd. Pat. App. Inter. 1993). MPEP § 2143.01. Here, no objective reason exists to go beyond the teachings of Aswell. Finally, the Declaration proves that the concentrations and amounts of the elements present in Aswell do not work in the system of the present invention. The process of the present invention could be, at most, obvious to try.

The Examiner, in the Advisory Action dated 11 October 2000 (Appendix 3) stated that the declaration and arguments submitted thereto were considered but not accepted because they are directed to the amounts of oxygen uptake accelerator, which is not a recitation in the independent claims. The Examiner suggested that the Applicant should consider including amounts of oxygen uptake accelerator in the independent claims. However, as explained above, the amounts of accelerator are not required to be present in Claims 1 or 17 because the teachings of Aswell did not render obvious the teachings present in these claims. Specifically, it is not obvious to a person of ordinary skill in the art, how the teachings of Aswell would be modified so that the oxygen content could be reduced from 2 vol % to a level less than about 0.5 vol. % within 90 minutes after the accelerator and the oxygen absorber are brought into contact.

CONCLUSION

As discussed above the Applicant's invention as defined in claims 1, 11, 13-15, 17-19 and 21 of the present invention is not obvious from Aswell. One skilled in the art would find not suggestion that Aswell's process could be adapted to achieve the Applicant's results – let alone how to do so. The experiments reported by Evans in fact cast doubt on the Aswell teachings and would discourage an investigator from experimentation with much lower oxygen levels and temperatures. Therefore, the Applicants respectfully submit that all the

claims presented in this application are unobvious and allowable over the Aswell reference.
The Board should reverse the Examiner's rejection.

The fee of \$310.00 required by 37 C.F.R. 1.17(f) is enclosed herewith. The Commissioner is hereby authorized to charge deposit account No. 10-0447 (47097-00716USC2) for any additional fees inadvertently omitted which may be necessary now or during the pendency of this application, except for the Issue Fee.

In accordance with 37 C.F.R. §1.192(a), this brief is submitted in triplicate.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Harold N. Wells", written over a horizontal line.

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APPENDIX OF APPEALED CLAIMS

1. An oxygen scavenging packet, comprising:
 - a. an oxygen permeable material formed into a closed packet for holding an oxygen absorber;
 - b. an oxygen absorber comprising iron within the packet of (a); and
 - c. a liquid oxygen uptake accelerator, said accelerator comprising water, said accelerator being present in an amount relative to the amount of said oxygen absorber, such that when the liquid accelerator and oxygen absorber are brought into contact the oxygen absorber is capable of reducing the oxygen content of a predetermined volume containing about 2 vol. % oxygen to less than 0.5 vol. % oxygen at a temperature of about 34°F in no more than 90 minutes after said accelerator and oxygen absorber are brought into contact.
11. An oxygen scavenging packet of Claim 1, wherein said oxygen absorber of (b) further comprises silica gel and a carbon dioxide generator.
12. An oxygen scavenging packet of Claim 1, wherein said iron is electrolytically annealed and reduced.
13. An oxygen scavenging packet of Claim 1, wherein said oxygen uptake accelerator further comprises a salt.
14. An oxygen scavenging packet of Claim 1, wherein said oxygen uptake accelerator further comprises an acid.
15. An oxygen scavenging packet of Claim 1, wherein said oxygen uptake accelerator is contained within an enclosed space within said packet.
16. An oxygen scavenging packet of Claim 1, wherein said oxygen uptake accelerator is contained within a bibulous wick, said wick extending from the exterior of said packet into the interior of said packet.
17. A method of reducing the oxygen concentration in an enclosed space comprising:

a. placing an oxygen scavenging packet within said enclosed space, said oxygen scavenging packet comprising:

i. an oxygen permeable material formed into a closed packet; and
ii. an oxygen absorber within said closed packet, said oxygen absorber comprising iron;

b. introducing a liquid oxygen uptake accelerator comprising water directly onto said oxygen absorber, wherein said liquid oxygen uptake accelerator is introduced in an amount relative to the amount of said oxygen absorber, such that when the oxygen uptake accelerator and oxygen absorber are brought into contact, the oxygen absorber is capable of reducing the oxygen content of a predetermined volume containing about 2 vol. % oxygen to less than 0.5 vol. % oxygen at a temperature of about 34°F in no more than 90 minutes after said oxygen uptake accelerator and oxygen absorber are brought into contact.

18. A method of Claim 17, wherein said oxygen absorber further comprises silica gel and a carbon dioxide generator.

19. A method of Claim 17, wherein said oxygen uptake accelerator further comprises a salt.

20. A method of Claim 17, wherein said iron is electrolytically annealed and reduced.

21. A method of Claim 17, wherein said oxygen uptake accelerator further comprises an acid.

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Re: Applicant(s): DelDuca et al
Serial No. 09/346,752
Filing Date: July 2, 1999
For: Oxygen Scavenger Accelerator
Docket No.: 47097-00716USC2 (PCOS:716--2)

Dear Sir:

Transmitted for filing with the Patent and Trademark Office are the following documents for the above-referenced patent application:

1. Transmittal Letter;
2. Response to Office Action Dated May 23, 2000;
3. Request for One-Month Extension of Time;
4. Change of Address Form;
5. Declaration Under 37 C.F.R. § 1.132;
6. Check in the amount of \$110.00; and
7. Postcard acknowledgment.

In re Appln of DelDuca et al
Serial No. 09/346,752

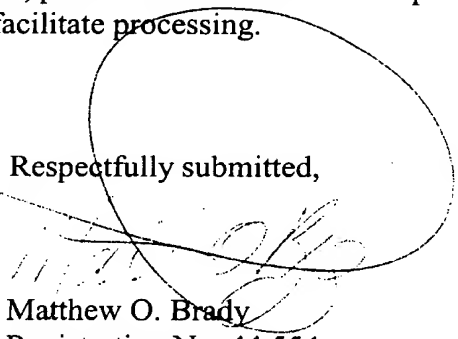
Please address all communications related to this to:

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In the event there is an under or over payment, please debit or credit our Deposit Account #10-0447. This letter is being filed in duplicate to facilitate processing.

Respectfully submitted,

Date: 1/15/2000


Matthew O. Brady
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

DelDuca et al.

Group Art Unit: 1721

Serial No.: 09/346,752

Examiner: LaToya Cross

Filed: July 2, 1999

Atty. Docket No.: 47097-716USC2
(PCOS:716--2)

For: OXYGEN SCAVENGER
ACCELERATOR

RESPONSE TO OFFICE ACTION DATED MAY 23, 2000

Box PATENT APPLICATION
Assistant Commissioner for Patents
Washington, DC 20231

Dear Sir:

This paper is in response to the Office Action dated May 23, 2000. The shortened statutory period for response is three months from the mailing date, *i.e.*, August 23, 2000. This response is being filed within one month of that day. Accordingly, a one-month extension is hereby requested. The appropriate fees are included herein.

IN THE CLAIMS

Please amend claims 1 & 17 and add new claims 22-25 as follows:

1. (Twice Amended) An oxygen scavenging packet, comprising:

- a. an oxygen permeable material formed into a closed packet for holding an oxygen absorber;
- b. an oxygen absorber comprising iron within the packet of (a); and
- c. a liquid oxygen uptake accelerator, said accelerator comprising water, said accelerator being present in an amount relative to the amount of said oxygen absorber, such that when the liquid accelerator and oxygen absorber are brought into contact by injection, the oxygen absorber is capable of reducing the oxygen content of a predetermined volume containing about 2 vol. % oxygen to less than 0.5 vol. % oxygen at a temperature of about 34°F in no more than 90 minutes after said accelerator and oxygen absorber are brought into contact

17. (Amended) A method of reducing the oxygen concentration in an enclosed space comprising:

- a. placing an oxygen scavenging packet within said enclosed space, said oxygen scavenging packet comprising:
 - i. an oxygen permeable material formed into a closed packet; and
 - ii. an oxygen absorber within said closed packet, said oxygen absorber comprising iron;
- b. introducing, by injection, a liquid oxygen uptake accelerator comprising water directly onto said oxygen absorber, wherein said liquid oxygen uptake accelerator is introduced in an amount relative to the amount of said oxygen absorber, such that when the oxygen uptake accelerator and oxygen absorber are brought into contact, the oxygen absorber is capable of reducing the oxygen content of a predetermined volume containing about 2 vol.

% oxygen to less than 0.5 vol. % oxygen at a temperature of about 34°F in no more than 90 minutes after said oxygen uptake accelerator and oxygen absorber are brought into contact.

Please insert new claims 22-25 as follows:

--22. The oxygen scavenging packet of Claim 1, wherein said injection is performed by a syringe.

23. The oxygen scavenging packet of Claim 1, wherein said injection is performed by an automated metering and dispensing pump.

24. The method of Claim 17, wherein said injection is performed by a syringe.

25. The method of Claim 17, wherein said injection is performed by an automated metering and dispensing pump.--

REMARKS

Claims 1 and 11-21 are pending in this application and are rejected by the Examiner. Claims 1 and 17 have been amended and Claims 22-25 have been added by this reply. Reconsideration of the present application, in light of the following remarks, is hereby requested.

Section § 103 Rejections

Claims 1, 11, 13-15, 17-19, and 21 were rejected under 35 U.S.C. § 103 (a) as being unpatentable over U.S. Patent No. 4, 588,561 to Aswell (hereinafter referred to "Aswell"). As described in the present application, the oxygen uptake accelerator, in this case water or acetic acid, must be contained within the oxygen scavenging packet in order to increase the rate of oxygen absorption. Page 8, lines 25-27 of the application. Specifically, the introduction of water or an aqueous solution of acid in the oxygen absorber packet of an iron-

based oxygen absorber serves to activate and dramatically increase the rate of oxygen uptake of the iron inside the packet. Page 6, lines 29-31 of the application. As shown in FIGS. 9-11 of the application and on pages 9-10 of the application, small water injections (less than approximately 1.0 ml) are preferred.

The present invention as claimed differs from Aswell in its ability to reduce the oxygen concentration from 2 vol. % to below 0.5 vol. % in a modified atmosphere package at 34 degrees Fahrenheit at a very fast rate. This increased rate is brought about by the addition of specific amounts of an oxygen accelerator comprising water to the iron-based oxygen absorber immediately before use of the oxygen scavenging packet. FIG. 11 of the present application shows that by practicing the claimed invention, two commercially-available packets injected with the claimed amount of accelerator of capable of reducing the oxygen level in a quart-sized jar from about 2 volume percent oxygen to nearly 0 volume percent oxygen in about 90 minutes.

As noted in previous responses, Aswell does not teach the claimed ratios of absorber to accelerator and therefore does not teach the unexpected results and benefits and speed of reduction of oxygen levels as seen by the use of these ratios. In contrast, Aswell teaches that "water should be added to the composition at a level of about 60 to about 80 percent of the weight of the oxygen reactive composition." Aswell, col. 4, lines 53-56. Aswell also teaches that the oxygen reactive composition contains from about 4.5 to about 6.0 grams (col. 4, lines 32-34) and that the amount of iron in the oxygen reactive composition is from about 25 to about 35 percent. Aswell, col. 4, lines 15-16. The calculation using these numbers shows that the amount of water to be used per gram of iron is approximately 10 times that of the claimed invention.

The Declaration of Susan P. Evans under 37 C.F.R. § 1.132 ("Evans Declaration") is submitted herewith and provides clear evidence that the present invention, specifically reducing the oxygen content from 2 vol. % to less than 0.5 vol. % at a temperature of about 34 F in no more than 90 minutes, would not have been obvious in view of the teachings of Aswell.

The levels of iron and water present in Aswell, if used in the Applicant's system, would not provide a similar reduction in oxygen content. The Declaration reports the results of experiments in which the conditions and specifications (including the amount of water used) of Aswell were duplicated in the same type of bag to determine the amount of oxygen content reduction, if any. In fact, experiments using conditions from Aswell, as described in detail below, were not even able to achieve a reduction in oxygen to a level of 2 vol. % oxygen.

During experimentation, several quart jars were tested at room temperature with an ambient atmosphere of 20.9 vol. % oxygen. One MRM-200 (weighing approximately 10g) sachet was activated with liquid (either 5% Acetic Acid (100% vinegar) or water) and placed in the quart jar. The lid was tightly closed and allowed to sit for 60 minutes. The lid of the quart jar had a 1/8" hole drilled into it to allow a reading to be taken from the quart jar using an oxygen sensor. A piece of septum was placed over the hole to ensure that there was no gas exchange between the jar and the outside environment. At the end of the sixty minutes, a reading of percent oxygen and percent carbon dioxide was taken from the jar and recorded. This procedure was repeated for three runs for each of the following activators: 1.0 ml of 5 % Acetic Acid (100% vinegar) and 1.2, 6.5 and 12 ml of water. Evans Declaration at ¶ 5.

As stated in the Evans Declaration, the results of the testing referred to above indicate that the amount of liquid present significantly affects the amount of oxygen within the jar.

Specifically, as the amount of water increases to the level of that used in Aswell (Aswell contains 60-80% water relative to the weight of the oxygen reactive material, the experiments using 6.5 and 12 ml water in this experiment used at least the level of water present in Aswell), the reaction becomes impractical to continue because a very small amount of oxygen is actually being removed from the system. Basic scientific laws indicate that this reaction would be even slower (*i.e.*, less oxygen would be absorbed) at lower temperatures. Using the temperature and the amount of water, in accordance with the levels in Aswell, would not permit one to predict the temperature and the amount of water required to reduce the amount of oxygen to less than 0.5 vol. %, as disclosed and claimed in the present application. Evans Declaration at ¶ 7.

Further testing, at 72 degrees Fahrenheit, of MRM-200 (using 1 ml of vinegar) packets and TRM-5.5 (using 1.3-1.4 ml water) sachets resulted in the MRM packet reaching 4 vol. % oxygen while the TRM only being able to reach 11 vol. % oxygen. Similarly, the MRM reached 9.6 vol. % oxygen and the TRM was only able to achieve approximately 15.2 vol. % oxygen at 34 degrees Fahrenheit. Thus, the rate of absorption of oxygen between 21 vol. % and 2 vol. % at room conditions does not correspond with the rate of oxygen absorption between 2 vol. % and 0 vol. % at low temperatures. Evans Declaration at ¶ 8-9. Thus, the material disclosed by Aswell (the data achieved at a rate of oxygen between 21 vol. % oxygen and 2 vol. % oxygen) does not anticipate or render obvious to one of ordinary skill in the art the approach of the present invention wherein the rate of oxygen can be reduced much below 2% oxygen with a much smaller volume of water than that used in Aswell.

Furthermore, the water used in the present invention will activate and accelerate iron-based oxygen absorbers via the presence of hydronium ions in the water. In contrast, the

water disclosed in the Aswell patent dissolves a portion or all of the acid and is used as a dispersive and wetting surfactant. Furthermore, Aswell uses a filler at a level of 40-60% (Aswell, col. 4, ll. 17-18). Aswell indicates that the filler absorbs the water (present at a level of between 60-80% of the weight of the oxygen reactive composition) through a tea-bag type object or other device. Aswell does not inject the water (the oxygen uptake accelerator) directly into the oxygen scavenging packet to increase the rate of oxygen absorption as performed in the present invention.

The mere fact that references can be modified does not render the resultant modification obvious unless the prior art also suggests the desirability of the modification. *In re Mills*, 916 F.2d 680 (Fed. Cir. 1990); MPEP § 2143.01. Aswell did not mention or discuss the inventions claimed in the present application. Furthermore, even though modifications of the disclosures of Aswell may have been within the ordinary skill in the art, a *prima facie* case of obviousness is not met without some objective reason to go beyond the objective teachings of the reference. *See Ex parte Levengood*, 28 U.S.P.Q. 2d 1300 (Bd. Pat. App. Inter. 1993). MPEP § 2143.01. Finally, the Declaration proves that the concentrations and amounts of the elements present in Aswell do not work in the system of the present invention. Simply put, the process of the present invention, that allegedly may have been obvious to try, does not lead to an obvious result, especially without any teaching or suggestion in Aswell to indicate that the teachings and results of the present invention would have been obvious.

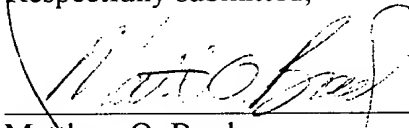
As discussed above and for the aforementioned reasons, the claims of the present invention are distinguished from the prior art. Therefore, in view of the discussion above, Applicants respectfully submit that all the claims presented in this application are allowable

In re Appln. of DelDuca et al.
Serial No. 09/346,752

over the cited references of record. Examiner is invited to call the undersigned to discuss any other issues that may need to be resolved.

The Commissioner is hereby authorized to charge Deposit Account No. 10-0447 (Order No. 47097-00716USC2) for any additional fees inadvertently omitted (except for the issue fee) that may be necessary now or during the pendency of this application.

Respectfully submitted,


Matthew O. Brady
Reg. No. 44,554
Attorney for Applicant

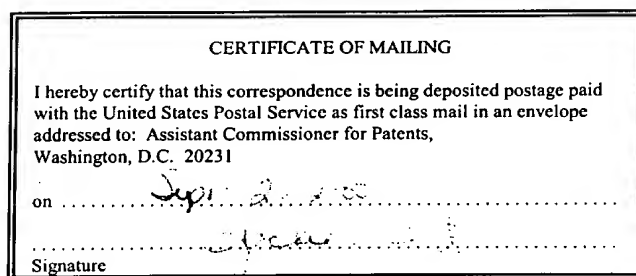
JENKENS & GILCHRIST
1445 Ross Avenue
Suite 3200
Dallas, Texas 75202-2799
(312) 744-0090

Date: September 25, 2000

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
DelDuca et al)
Serial No.: 09/346,752) Examiner: LaToya Cross
Filed: July 2, 1999) Group Art Unit: 1721
For: Oxygen Scavenger Accelerator

BOX AMENDMENT
Assistant Commissioner for Patents
Washington, D.C. 20231



Dear Sir:

PETITION FOR EXTENSION OF TIME

A petition is hereby made under 37 C.F.R. § 1.136 for a one month extension of time in which to respond to the Office Action mailed May 23, 2000. If this petition is granted, the new response date will be Monday, September 25, 2000, September 23, 2000 being Saturday.

If these papers are not considered timely filed with the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136 for any necessary additional time to make these papers timely, and any additional fees required under 37 C.F.R. §1.136 for any necessary extension of time may be charged to Deposit Account No. 10-0447.

In the event there is an under or over payment, please debit or credit our Deposit Account #10-0447.

Respectfully submitted,

JENKENS & GILCHRIST,
A Professional Corporation

[Signature]
Matthew O. Brady
Reg. No. 44,554

1445 Ross Avenue, Suite 3200
Dallas, Texas 75202-2799
(312) 425-8512
(312) 425-3909 (fax)

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

DelDuca et al

Serial No.: 09/346,752

Filed: July 2, 1999

For: OXYGEN SCAVENGER
ACCELERATOR

Group Art Unit: 1721

Examiner: LaToya Cross

Atty. Docket No.: 47097-00716USC2

CHANGE OF ADDRESS

BOX AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as First Class Mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. on the date indicated below:

9 25 00
Date

[Signature]
Signature

Please confirm that the following address concerning the attorneys of record, is of record, and address all future correspondence concerning the above-identified application as follows:

Ronald B. Coolley
Jenkins & Gilchrist
1445 Ross Avenue, Suite 3200
Dallas, Texas 75202-2799

and direct all telephone calls concerning the above-identified application as follows:

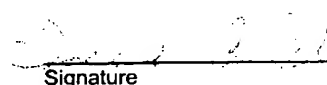
phone (312) 744-0090
fax (312) 755-4489

Respectfully submitted,

Dated: 9/25/00

By: [Signature]

Matthew O. Brady
Reg. No. 44,554

CERTIFICATE OF MAILING 37 C.F.R. 1.8	
I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, DC 20231, on the date below:	
Date 9-20-99	Signature 

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

DelDuca et al.

Group Art Unit: 1721

Serial No.: 09/346,752

Examiner: LaToya Cross

Filed: July 2, 1999

Atty. Docket No.: 47097-716USC2
(PCOS:716—2)

For: OXYGEN SCAVENGER
ACCELERATOR

DECLARATION UNDER 37 C.F.R. § 1.132

Box PATENT APPLICATION

Assistant Commissioner for Patents

Washington, DC 20231

Dear Sir:

I, **SUSAN P. EVANS**, hereby declare that:

1. I work closely with the inventors of the subject application and have been personally involved in the development of the claimed oxygen packets and the claimed methods of increasing the oxygen uptake of an oxygen absorber.

2. I hold a Bachelor of Science in Chemical Engineering degree from Bucknell University awarded in 1970. I have been employed by Pactiv Corporation (and its predecessors) since 1970 and presently hold the title of Development Engineering Supervisor.

3. Based on my experience and education, I have a thorough understanding of the level of ordinary skill in the art of oxygen scavenging packets for use in modified atmosphere packaging systems.

4. I am familiar with the Office Action dated May 23, 2000, and wish to present data that demonstrates that using the methods and proportions of Aswell (U.S. Patent No. 4,588,561), it was not possible to obtain the amount of oxygen claimed in the present invention (less than 0.5 vol. % oxygen at about 34 °F in no more than 90 minutes).

5. Under my direction, several quart jars were tested at room temperature with an ambient atmosphere of 20.9 vol. % oxygen. One MRM-200 (weighing approximately 10g) sachet was activated with liquid (5% Acetic Acid (100% vinegar) or Water) and placed in the quart jar. The lid was tightly closed and allowed to sit for 60 minutes. The lid of the quart jar had a 1/8" hole drilled into it to allow a reading to be taken from the quart jar using an oxygen sensor. A piece of septum was placed over the hole to ensure that there was no gas exchange between the jar and the outside environment. At the end of the sixty minutes, a reading of percent oxygen and percent carbon dioxide was taken from the jar and recorded. This procedure was repeated for three runs for each of the following activators: 1.0 ml of 5 % Acetic Acid (100% vinegar) and 1.2, 6.5 and 12 ml of water.

6. The results of placing the scavenger within the jar were as follows:

Test	Activator	One hour percent oxygen	One hour percent Carbon dioxide	Time of Test
1	5 % Acetic	5.5	18.8	60 min.

	Acid			
2	5 % Acetic Acid	4.72	19.1	60 min.
3	5 % Acetic Acid	5.38	18.1	60 min.
Average	-	5.20	18.67	60 min.

Test	Activator	One hour percent oxygen	One hour percent Carbon dioxide	Time of Test
4	1.2 ml water	6.38	16.5	60 min.
5	1.2 ml water	8.44	19.3	60 min.
6	1.2 ml water	8.40	16.7	60 min.
Average	-	7.74	17.50	60 min.

Test	Activator	One hour percent oxygen	One hour percent Carbon dioxide	Time of Test
7	6.5 ml water	15.8	17.5	60 min.
8	6.5 ml water	16.4	16.8	60 min.
9	6.5 ml water	15.7	18.4	60 min.
Average	-	15.97	17.57	60 min.

Test	Activator	One hour percent oxygen	One hour percent Carbon dioxide	Time of Test
10	12 ml water	17	13.5	60 min.
11	12 ml water	16.2	18.5	60 min.
12	12 ml water	16.3	14.7	60 min.
Average	-	16.50	15.57	60 min.

7. The results shown in Paragraph 6 indicate that the amount of liquid significantly affects the amount of oxygen within the jar. Specifically, as the amount of water increases to the level of that used in Aswell (Aswell contains 60-80% water relative to the weight of the oxygen reactive material, the experiments using 6.5 and 12 ml

water in this experiment used at least the level found in Aswell), the reaction becomes impractical to continue because a very small amount of oxygen is actually being removed from the system. Basic scientific laws indicate that this reaction would be even slower (*i.e.*, less oxygen would be absorbed) at lower temperatures. Thus, I conclude that using the temperature and the amount of water, in accordance with the levels in Aswell, would not permit one to predict the temperature and the amount of water required to reduce the amount of oxygen to less than 0.5 vol. %, as disclosed and claimed in the present application.

8. I also have knowledge of testing performed by Gary Delduca (one of the inventors of the present invention) of MRM-200 packets and TRM-5.5 sachets. The MRM packets use 1 ml of vinegar while the TRM sachet uses 1.3-1.4 ml of water. At 72 degrees Fahrenheit in a quart jar, the MRM packet reaches 4 vol. % oxygen while the TRM only is able to reach 11 vol. % oxygen. Similarly, the MRM reaches 9.6 vol. % oxygen and the TRM is only able to achieve approximately 15.2 vol. % oxygen at 34 degrees Fahrenheit.

9. The results of paragraph 8 indicate that the rate of absorption of oxygen between 21 vol. % and 2 vol. % at room conditions does not correspond with the rate of oxygen absorption between 2 vol. % and 0 vol. % at low temperatures.

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine and/or imprisonment or both under § 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the above-referenced or any patent issuing thereon.

August 24th, 2000
DATE

Susan P. Evans
SUSAN P. EVANS



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/346,752 07/02/99 DELDUCA

G 47097-716C1
PCOS:716--2

EXAMINER

IM22/0523

RONALD B COOLLEY
ARNOLD WHITE & DURKEE
P O BOX 4433
HOUSTON TX 77210-4433
INTELLECTUAL PROPERTY

DOCKETED ☒ UPDATED ☐

Previously ☒ Not Required ☐

Appl. Info ☐

Reg/Grant Info ☐

Action Required: 0-0-0

Date Due/Done: 2/8/00

By: [Signature] Checked [Signature]

CROSS, L

ART UNIT

PAPER NUMBER

1743

DATE MAILED:

05/23/00

MAY 30 2000

JENKENS & GILCHRIST

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

RECEIVED
JUN 07 2000
BY J&G - CHICAGO

REC'D HOWREY SIMON ARNOLD & WHITE

MAY 26 2000

HOUSTON DOCKETING DEPT.

* DOCKETED

int: SW DT: 4/14/00

resp to provoke advising action 7/23/00

Action Due Date:
resp to final rejection/appeal-3 months 8/23/00

resp deadline/appeal/deadline 11/23/00

Office Action Summary

Application No.
09/346,752

Applicant(s)
Delduca et al

Examiner
LaToya Cross

Group Art Unit
1743



☒ Responsive to communication(s) filed on Mar 13, 2000

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1 and 11-21 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1 and 11-21 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

REC'D HOWREY SIMON ARNOLD & WHITE
MAY 26 2000
HOUSTON DOCKETING DEPT.

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 1721

DETAILED ACTION

This Office Action is in response to Applicants' remarks filed on March 13, 2000 and entered as Paper No. 5. Claims 1 and 11-21 are pending in the instant application.

Status of Rejections from Previous Office Action

The rejection of claims 1 and 11-21 under 35 U.S.C. 112, second paragraph is withdrawn in view of Applicants' arguments that the amounts of components need to be present in the claims in order for the claims to be definite.

The rejection of claims 1, 12, 16, 17, and 20 under 35 U.S.C. 103 in view of Motoyama et al '442 and Nakoneczny et al '111 is withdrawn in view of Applicants' arguments that Motoyama et al '442 does not disclose that the reduction of oxygen in less than 90 minutes.

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1, 11, 13-15, 17-19, and 21 remain to be rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,588,561 to Aswell et al (hereinafter referred to as Aswell et al '561).

Art Unit: 1721

Applicants' claimed invention is directed to an oxygen scavenging packet comprising an oxygen permeable material formed into a closed packet, an oxygen absorber comprising iron within the closed packet, and a liquid oxygen uptake accelerator comprising water. The accelerator is present in an amount such that when the accelerator is contacted with the oxygen absorber, the oxygen content of a predetermined volume containing about 2% by volume oxygen to less than 0.5% by volume at a temperature of about 34°F in no more than 90 minutes.

Aswell et al '561 discloses a package for removing oxygen from a gaseous mixture. The package includes a gas impermeable sealable container having a sachet (packet) disposed therein. The packet contains an oxygen absorber such as iron (col. 3, lines 40-50). Also provided in the package is a carbon dioxide generator, such as an acid and a salt (col. 3, lines 51-68). Suitable acids include citric acid. Silica gel may also be added (col. 4, lines 4-6). Water (an uptake accelerator) is added to the oxygen absorber to activate the oxygen absorber and achieve sufficient oxygen reduction (col. 4, lines 53-56).

Aswell et al '561 differ from the instantly claimed invention in that the reference does not specifically state that 2% volume oxygen is reduced to less than 0.5% volume when the oxygen absorber is in contact with the uptake accelerator. However, at col. 4, lines 14-46, Aswell et al '561 discloses preferred amounts of oxygen absorber (iron) and uptake accelerator (water). Aswell '561 teaches the use of 25-35 percent by weight iron and about 60-80 percent by water. Applicants suggest that the use of 0.2-0.8mL of water per 2.5g of iron is sufficient to achieve the desired oxygen reduction (specification page 10). Thus, it is believed that the amounts of oxygen

Art Unit: 1721

absorber and uptake accelerator as disclosed by Aswell '561 are suitable enough to provide sufficient oxygen reduction, absent evidence to the contrary.

Therefore, for the reasons set forth above, Applicants' claimed invention is deemed to be obvious, within the meaning of 35 U.S.C. 103, in view of the teachings of Aswell et al '561.

Response to Arguments

3. Applicant's arguments filed March 13, 2000 have been fully considered but they are not persuasive.

Applicants' arguments concerning the rejection of claims 1, 11, 13-15, 17-19, and 21 under 35 U.S.C. 103 in view of Aswell et al '561 are directed to Applicants' assertion that "Aswell does not teach the claimed ratios of absorber to accelerator". Applicants' claims do not recite a ratio of absorber to accelerator (this recitation was deleted in the preliminary amendment). It is noted that, as Applicants point out, Aswell uses a greater amount of water than do Applicants. However, Applicants' have not shown the criticality of the amount of water and how a smaller amount of water will reduce oxygen quicker. Aswell et al '561 teaches that the goal of their invention is to attain less than 2% oxygen within the container in a period of less than about 2 hours (col. 4, lines 47-50). Thus, since Applicants attempt essentially the same idea, it is the position of the Examiner that the amount of water used as an oxygen uptake accelerator is not

Art Unit: 1721

critical, absent evidence to the contrary. Thus, the claimed invention remains to be deemed obvious in view of Aswell et al '561.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaToya I. Cross whose telephone number is (703) 305-7360. The examiner can normally be reached on Monday through Friday from 8:00 a.m. to 4:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden, can be reached at (703) 308-4037. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-5408.

Application/Control Number: 09/346,752


Page 6

Art Unit: 1721

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

LIC 810

May 18, 2000


Jill Warden
Supervisory Patent Examiner
Technology Center 1700

INTELLECTUAL PROPERTY

OCT 23 2000

JENKENS & GILCHRIST



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

T-D

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/346,752 07/02/99 DELDUCA

G PCOS:716--2

47097-716 P2

RONALD B COOLLEY
JENKENS & GILCHRIST
1445 ROSS AVENUE
SUITE 3200
DALLAS TX 75202-2799

IM22/1011

EXAMINER

CROSS, L

ART UNIT

PAPER NUMBER

1743

DATE MAILED:

10/11/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

*DOCKETED

FINAL REIN
MAIL
DATE: 5/23/00

Int: TSPD DT: 10/23/00
RESP TO ADVISORY ACTION - w/1
Action ~ Due Date: 10/23/00 EXT
RESP TO ADVISORY ACTION
DEADLINE: 11/23/00

Advisory Action

Application No.
09/346,752

Applicant(s)

Delduca et al

Examiner

LaToya Cross

Group Art Unit

1743



THE PERIOD FOR RESPONSE: [check only a) or b)]

- a) ☒ expires 4 months from the mailing date of the final rejection.
- b) ☐ expires either three months from the mailing date of the final rejection, or on the mailing date of this Advisory Action, whichever is later. In no event, however, will the statutory period for the response expire later than six months from the date of the final rejection.

Any extension of time must be obtained by filing a petition under 37 CFR 1.136(a), the proposed response and the appropriate fee. The date on which the response, the petition, and the fee have been filed is the date of the response and also the date for the purposes of determining the period of extension and the corresponding amount of the fee. Any extension fee pursuant to 37 CFR 1.17 will be calculated from the date of the originally set shortened statutory period for response or as set forth in b) above.

- ☐ Appellant's Brief is due two months from the date of the Notice of Appeal filed on _____ (or within any period for response set forth above, whichever is later). See 37 CFR 1.191(d) and 37 CFR 1.192(a).

Applicant's response to the final rejection, filed on Sep 29, 2000 has been considered with the following effect, but is NOT deemed to place the application in condition for allowance:

☒ The proposed amendment(s):

- ☐ will be entered upon filing of a Notice of Appeal and an Appeal Brief.

☒ will not be entered because:

- ☐ they raise new issues that would require further consideration and/or search. (See note below).
- ☐ they raise the issue of new matter. (See note below).
- ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal.
- ☒ they present additional claims without cancelling a corresponding number of finally rejected claims.

NOTE:

- ☐ Applicant's response has overcome the following rejection(s):

- ☐ Newly proposed or amended claims _____ would be allowable if submitted in a separate, timely filed amendment cancelling the non-allowable claims.

- ☒ The affidavit, exhibit or request for reconsideration has been considered but does NOT place the application in condition for allowance because:

App. declaration and arguments are directed to the amounts of oxygen uptake accelerator, which is not a recitation in the independent claims. App. should consider including these amounts in the independent claims.

- ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.

- ☒ For purposes of Appeal, the status of the claims is as follows (see attached written explanation, if any):

Claims allowed: _____

Claims objected to: _____

Claims rejected: 11-21

- ☐ The proposed drawing correction filed on _____ ☐ has ☐ has not been approved by the Examiner.
- ☐ Note the attached Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☐ Other _____

JEFFREY SNAY
PRIMARY EXAMINER